im Vertrieb von CAMBOARD Electronics

KRAMER ELECTRONICS LTD.

# USER MANUAL

MODEL:

**RC-52A**
Room Controller

P/N: 2900-300090 Rev 1

www.camboard.de Tel. 07131 911201ce-info@camboard.de
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# 1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 11 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters and GROUP 11: Sierra Products.

Congratulations on purchasing your Kramer **RC-52A** Room Controller, which is designed to let you control an A/V system with ease, in a multimedia classroom or conference room.



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# 2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high performance high resolution cables

Go to http://www.kramerelectronics.com to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

## 2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality
- Position your Kramer **RC-52A** away from moisture, excessive sunlight and dust

**Caution:** No operator serviceable parts inside the unit

**Warning:** Use only the Kramer Electronics input power wall adapter that is provided with the unit

**Warning:** Disconnect the power and unplug the unit from the wall before installing



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# 3 Overview

The **RC-52A** is a 2 gang room controller with an analog volume control adjustment knob, an RS-232 port, an IR control port and six backlit and label capable buttons with three levels of lighting intensity available (set via the K-Config application). It sends an RS-232 or IR command—with the push of a button—to a device (such as a projector, display or switcher) via serial control protocols.

The **RC-52A** includes a front panel built-in IR Receiver for IR-command learning and IR repeating. The IR commands that are learned are used for the customized control of external sources, receiving the IR commands from different remote transmitters without the need for an external IR remote control unit.

By connecting to the USB port, each button can be assigned, using K-Config (see Section 5), with a trigger including up to eight actions (serial and/or IR and/or set light and/or lock and/or delay, see Section 5.2)

The **RC-52A** is available in European (80mm and 86mm height versions) and American versions.

The **RC-52A** also features:

- Remote analog audio level control
- Button lighting configuration
- A front panel lock that can be unlocked by a secret code which can be set by the configuration application

In addition, the **RC-52A** supports:

- Start up, timeout, and schedule macros
- Power supply over USB during configuration
- IR repeating through its IR receiver



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## 3.1 Defining the RC-52A Room Controller Front Panel

The **RC-52A** is available in three versions (see Figure 1): 80mm and 86mm for Europe and a version for the United States:

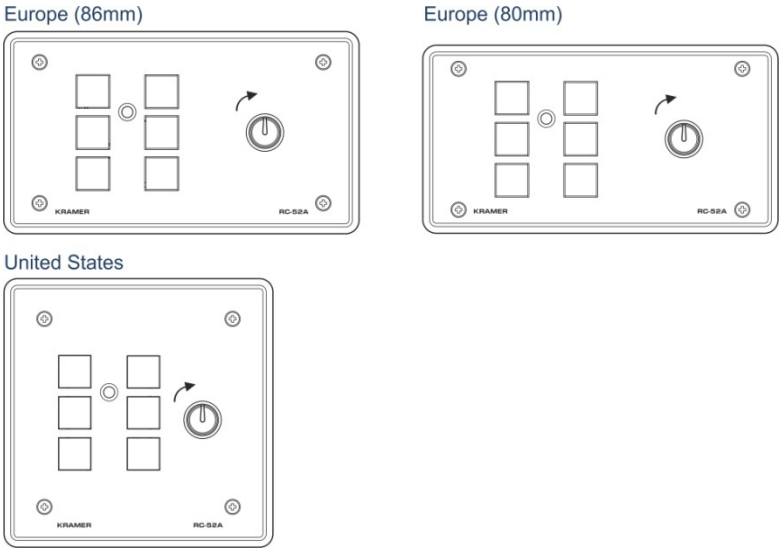


Figure 1: RC-52A Front Panel for Europe (80 and 86mm) and the United States


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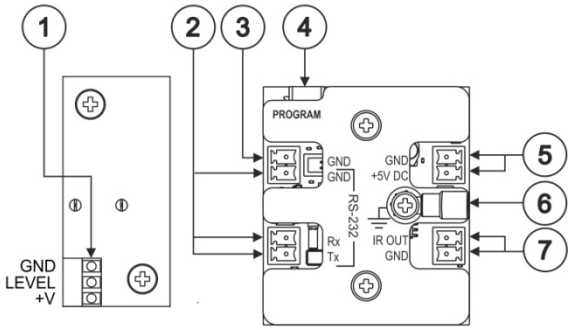
## 3.2 Defining the RC-52A Room Controller Rear Panel

Europe




United States

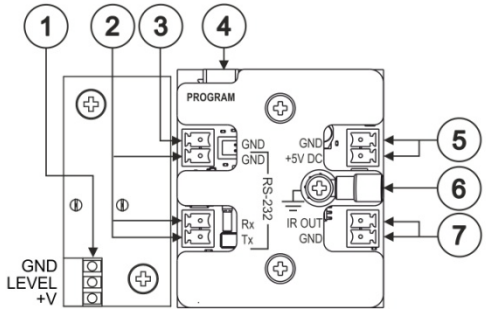



Figure 2: RC-52A Rear Panel for Europe (80 and 86mm) and the United States

| # | Feature | Function |
|---|---|---|
| 1 | Audio Potentiometer pinout | GND PIN: ground connection for the potentiometer<br>LEVEL PIN: wiper of the potentiometer<br>+V: +10V connection of the potentiometer |
| 2 | *RS-232* Terminal Block Connector | Connect to the RS-232 connector on the A/V equipment or a PC or other Serial Controller, see Section 4.1 |
| 3 | *GND* PIN | Not used |
| 4 | *PROGRAM* USB Connector | Connect to a computer for unit configuration |
| 5 | *GND* PIN | Connects (-) to the Ground |
| 6 | *+5V* PIN | Connects (+) to the connector for powering the unit |
| 7 | *IR OUT* PIN | Connect to an IR emitter cable |
| | *GND* PIN | |



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# 4 Connecting the RC-52A Room Controller

Always switch off the power to each device before connecting it to your Transmitter and Receiver pair. After connecting your Transmitter and Receiver pair, connect their power and then switch on the power to each device.

To connect the **RC-52A**, as shown in the example in Figure 3, do the following:

1. Connect an IR emitter to IR OUTPUT 1 and attach the emitter to the DVD player.
2. Connect the DVD output to the input of a projector.
3. Connect the RS-232 port (see Section 4.1) to the projector.
4. Connect the audio potentiometer PINs to the remote control terminal block connectors of a power amplifier (for example, the Kramer **912** *Power Amplifier*, see Section 4.2).
5. Connect the 5V DC power adapter to the **RC-52A** power socket and to the mains electricity.

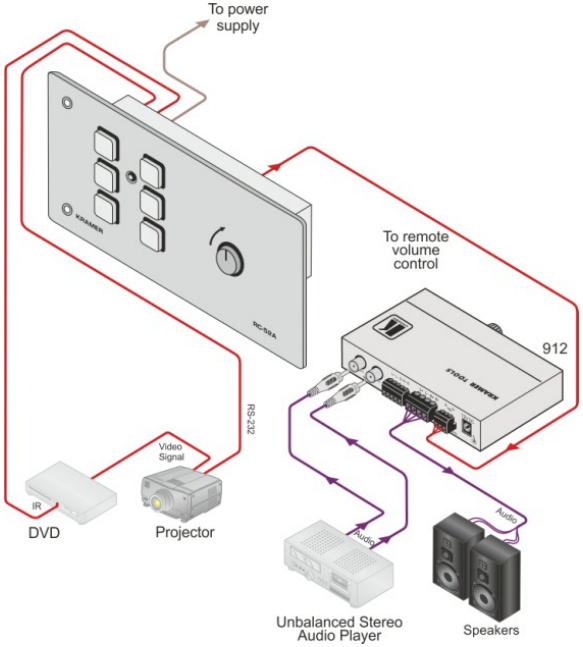


Figure 3: Connecting the RC-52A



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## 4.1 The RS-232 Pinout

The RS-232 9-pin D-sub port pinout is defined in Figure 4:

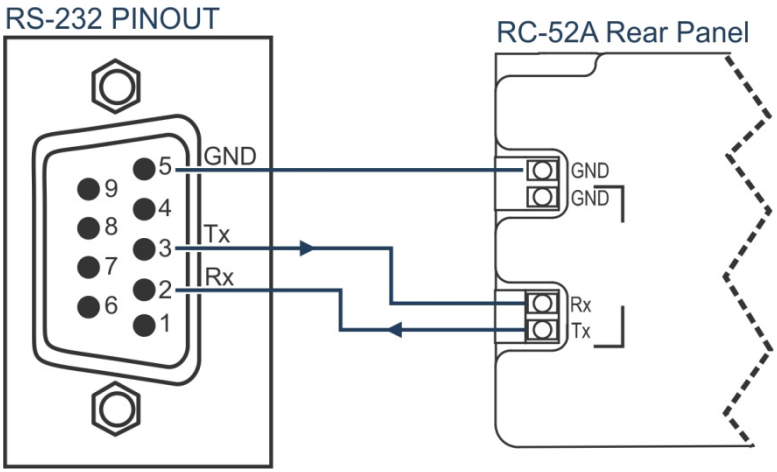


Figure 4: RS-232 Pinout

## 4.2 The Audio Potentiometer Pinout

The audio amplifier pinout is defined in Figure 5:

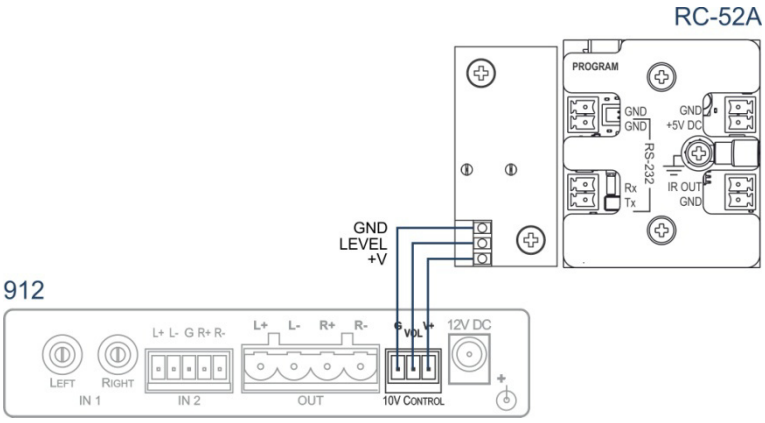


Figure 5: Audio Potentiometer Pinout

## 4.3 Connecting the IR-OUT

Figure 6 shows how to connect the Kramer IR emitter (3.5mm to IR Emitter Control Cable, P/N: C-A35/IRE-10). The white striped side connects to IR OUT, the black side connects to the Ground, and the LED Emitter Shell is affixed to the IR sensor window with the adhesive layer.

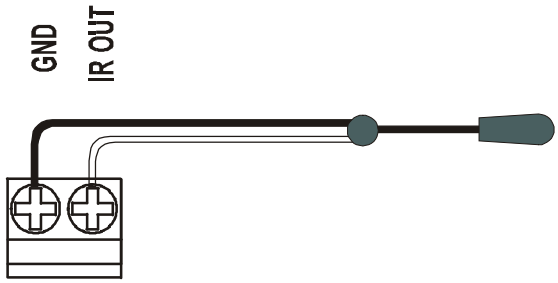


Figure 6: IR Emitter Wiring

## 4.4 Using the RC-52A as an IR Repeater

Once the **RC-52A** is mounted and powered, and the IR emitter is connected to a piece of A/V equipment (for example, a DVD), you can use it as an IR signal repeater, to extend the IR signal to that machine, which has no direct line-of-sight (see Figure 7).

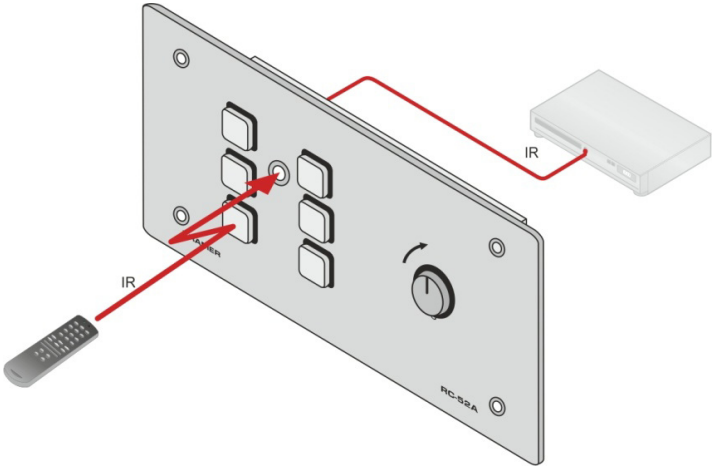


Figure 7: IR Repeater Operation



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# 5 Installing the Configuration Software

Download the **K-Config** configuration software from our Web site and install it (refer to the **K-Config** guide).

## 5.1 Configuring the RC-52A Buttons

To configure the **RC-52A** buttons, refer to the relevant Configuration guide.

Before you configure the **RC-52A** buttons:

1. Connect the **RC-52A** to your PC with the USB cable.
   There is no need to connect the RC-52A to a power supply for configuration since power is supplied over the USB cable.
2. Open the Configuration program.
3. Follow the instructions in the Configuration guide to configure the **RC-52A** buttons.

## 5.2 Locking and Unlocking the RC-52A

You can lock the front panel buttons by pressing a predefined button on the front panel. Pressing the lock button initiates a macro sequence (a series of commands, which can include the dimming of the lights, shutdown of the A/V machines and so on).

You can unlock the front panel buttons by pressing a predefined sequence of four buttons.

The locking procedure can be configured as a part of the timeout or scheduling event macros.

You can consult the installer of your unit regarding the specific configuration of the locking and unlocking feature on your system.



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# 6 Technical Specifications

| | |
|---|---|
| INPUT: | 1 IR Receiver |
| PORTS: | 1 RS-232 on a terminal block connector<br>1 IR OUT on a terminal block connector<br>1 USB port |
| CONTROL: | 10V volume control |
| POWER SOURCE: | 5V DC, 150mA |
| DIMENSIONS: | 2 gang for Europe (80cm or 86cm) and the USA |
| WEIGHT: | 0.3kg (0.67lbs) approx |
| OPTIONS: | RS-232 9-pin D-sub port to 3-pin terminal block connector cable (C-D9F/3PM-0.6); Kramer IR emitter cable (P/N: C-A35/IRE-10) |
| Specifications are subject to change without notice<br>Go to our Web site at http://www.kramerelectronics.com to access the list of resolutions | |



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**LIMITED WARRANTY**

We warrant this product free from defects in material and workmanship under the following terms.

**HOW LONG IS THE WARRANTY**

Labor and parts are warranted for seven years from the date of the first customer purchase.

**WHO IS PROTECTED?**

Only the first purchase customer may enforce this warranty.

**WHAT IS COVERED AND WHAT IS NOT COVERED**

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by us or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
3. Damage, deterioration or malfunction resulting from:
   i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
   ii) Product modification, or failure to follow instructions supplied with the product
   iii) Repair or attempted repair by anyone not authorized by Kramer
   iv) Any shipment of the product (claims must be presented to the carrier)
   v) Removal or installation of the product
   vi) Any other cause, which does not relate to a product defect
   vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

**WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR**

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

**HOW YOU CAN GET WARRANTY SERVICE**

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

**LIMITATION OF IMPLIED WARRANTIES**

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

**EXCLUSION OF DAMAGES**

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

**NOTE**: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

EN-50081: "Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47: FCC* Rules and Regulations: Part 15: “Radio frequency devices Subpart B Unintentional radiators”

**CAUTION!**

- Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- Use the supplied DC power supply to feed power to the machine.
- Please use recommended interconnection cables to connect the machine to other components.

* FCC and CE approved using STP cable (for twisted pair products)



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For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

**We welcome your questions, comments, and feedback.**
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E-mail: info@kramerel.com

**SAFETY WARNING**
Disconnect the unit from the power supply before opening and servicing

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